DAIRY at GUELPH

CANADA'S DAIRY UNIVERSITY

2022 ANNUAL REPORT

FROM OUR DIRECTOR

Dr. Stephen LeBlanc, Department of Population Medicine

Dairy at Guelph is the network of people at the University of Guelph doing research related to dairy production and foods. With over 60 faculty and 120 graduate students, we are one of the largest communities of interest at the university. Based on size, capacity, and productivity, we not only claim the title of Canada's Dairy University, but are one of the top centres of dairy research in the world.

Dairy at Guelph was created in 2016 thanks to the vision and initiative of Professors David Kelton and Milena Corredig. The goals were to connect researchers across campus and beyond and to build a brand to enhance recognition of our activities. The project grew, and Dairy at Guelph – The Centre for Dairy Research and Innovation – was officially constituted as a category one research centre by the University of Guelph in late 2020. I was appointed director in 2021, and this report marks my first full year leading the continued development of Dairy at Guelph.

We marked several milestones this year. Working with a professional marketing and communications agency, we formalized statements of our mission, vision, and values, and developed a strategic communications plan that is guiding our actions.

To help put our plans into action, we jointly recruited Katie Duncan as communications specialist for Dairy at Guelph. Katie's experience and energy have fueled improvements in our digital outreach, launched new online newsletters, and increased our capacity to share our story and research results with dairy producers. There is more to come as we build new content and platforms including a podcast series for dairy farmers.

One pillar of Dairy at Guelph is to connect researchers internally, to foster collaborations and increase links among people with shared interests. This year we hosted the first BBQ Social at the Elora research station to allow people to meet dairy facility staff and other Dairy at Guelph faculty, staff, and grad students from across campus. Our people can now show their Dairy at Guelph colours at work and in the community after a successful sale of stylish branded clothing.

A key part of our mission is to get our research results out to users. After several years of virtual events, our annual Dairy Research Showcase event returned in person to a capacity crowd for a full day of presentations and networking. We also returned to connect with dairy farmers at the Canadian Dairy XPO. Read more about these events below.

Another of our goals is to support dairy research and we are very pleased this year to offer the first graduate student scholarship through Dairy at Guelph, the Helen Leitch Dairy Development scholarship. Provided by the generosity of University of Guelph graduate, Dr. Helen Leitch, we hope this will be the first of several supports for our outstanding people and activities.

> **Success will be marked by sustaining and building our capacity and productivity, connecting with knowledge users, recognizing our contributions and taking pride in our people. We look forward to continuing to build this together in the year ahead.**

MEET THE STEERING COMMITTEE

Dr. Stephen LeBlanc

Director
Professor, Population Medicine

Dr. David Kelton

Founder, Steering Committee Member
Professor, Population Medicine

Dr. Christine Baes

Steering Committee Member
Professor, Animal Biosciences

Dr. Gisele LaPointe

Steering Committee Member
Professor, Food Science

Dr. Michael Steele

Steering Committee Member
Professor, Animal Biosciences

REFRESHING
OUR PATH FORWARD

In late 2022, Dairy at Guelph underwent a review of its mission and vision that sets strategic direction for the centre, with the goal of increasing awareness of the tremendous amount of dairy research done at the University of Guelph.

MISSION

Our mission is to enhance the accomplishments and recognition of dairy-related research at the University of Guelph.

VISION

We are a global leader in research to achieve sustainable, efficient dairy production and innovative foods for human health.

FOCUS

- Make connections among researchers and funders
- Build and enhance communications with our target audiences
- Celebrate our accomplishments
- Build a sense of community among students and faculty
- Provide strategic leadership and communications support for dairy research

DAIRY RESEARCH DAY

Dairy at Guelph's annual research day was held on November 1, 2022 at the Arboretum Centre, the first in-person event since 2019. Students and faculty gathered to present research results on topics including the genetics of bovine leukosis, the Resilient Dairy Genome Project, mental health and wellness in agriculture, microbial management for calves, ketosis in AMS (robotic milking) herds, and antimicrobial stewardship. For the first time, the event was live tweeted so audiences could follow along via the Dairy at Guelph Twitter feed. Videos of some of the presentations can be found on Dairy at Guelph's Youtube page.

MISS A PRESENTATION?
FIND IT ON YOUTUBE
@DAIRYATGUELPH

CANADIAN DAIRY XPO

The Canadian Dairy XPO is huge dairy trade show, attracting over 16,000 visitors over two days in Stratford, Ontario. Dairy at Guelph was there to connect with farmers and industry and highlight our research results. We offered virtual reality tours of the Ontario Dairy Research Centre and grad students and faculty talked about current and future projects.

RETIREMENTS

Dr. David Kelton
Professor Emeritus, Department of Population Medicine

Dr. David Kelton retired in January 2023 and will be named Professor Emeritus in June. Kelton is a veterinary epidemiologist in the department of Population Medicine at Ontario Veterinary College. His research interests include infectious and metabolic diseases of dairy cattle, including particular interest in Johne's Disease, bovine mastitis and bovine lameness. He has spent the last 25 years working closely with dairy producers, dairy producer organizations and veterinary practitioners developing research projects that address issues in the industry. Kelton has a long-standing research partnership with Dairy Farmers of Ontario and Lactanet and their work to validate and implement milk-based tests for Canadian dairy farmers.

Dr. Doug Goff
Professor Emeritus, Department of Food Science

Dr. Doug Goff retired in December 2022. Goff is now a Professor Emeritus in the department of Food Science at the Ontario Agricultural College, where he has taught the ice cream technology course since 1987. Goff has broad expertise related to dairy chemistry and processing and is well known for his expertise in ice cream, frozen dairy and non-dairy desserts. He is the co-author of the seventh edition of Ice Cream, a textbook, and has completed many research projects on the structure of ice cream and functionality of its ingredients. He is particularly interested in the structure and food functionality of non-starch polysaccharides, and their role in human nutrition as dietary fibre related to glycemia control.

Dr. Doug Goff

FUNDING FROM NSERC AND INDUSTRY COLLABORATORS

Improving dairy quality, nutrition and sustainability

In early 2022, Dr. Gisele LaPointe received $3.5 million in federal funding from the Natural Sciences and Engineering Research Council (NSERC) in addition to $1 million from Dairy Farmers of Ontario and contributions from Dairy Farmers of Canada, Novalait Inc., Lallemand Inc. and Lactalis Canada to lead a series of studies over five years that focuses on competitiveness and sustainability in the dairy sector.

Inspired by Dairy Farmers of Canada's National Dairy Research Strategy, LaPointe's study will focus on four key themes:

Farm sustainability

Changing feed ingredients, mitigating methane emissions and increasing cattle feed efficiency.

Animal health and welfare

Designing microbial treatments and preventing housing contamination.

Milk composition, quality and safety

Maintaining the regional flavours of Canadian cheeses while reducing dairy product spoilage and waste.

Dairy in human nutrition and health

Controlling food-borne pathogens and reducing antimicrobial gene persistence in gut microbes of dairy cattle.

Dr. Gisele LaPointe

Improving sustainability and herd health

In early 2023, the University of Guelph announced that Drs. Stephen LeBlanc, David Kelton and David Renaud would receive a total of nearly $4 million in funding for a series of 15 studies over five years aimed at improving sustainability and herd health. NSERC will provide 2.6 million with the remaining $1.3 million coming from industry collaborators at Dairy Farmers of Ontario, Dairy Farmers of Canada, Lactanet, and Veal Farmers of Ontario.

The research responds to the National Dairy Research Strategy focussing on two key themes:

Infectious disease mitigation

Understanding and mitigating the transmission of bovine leukosis and Salmonella Dublin.

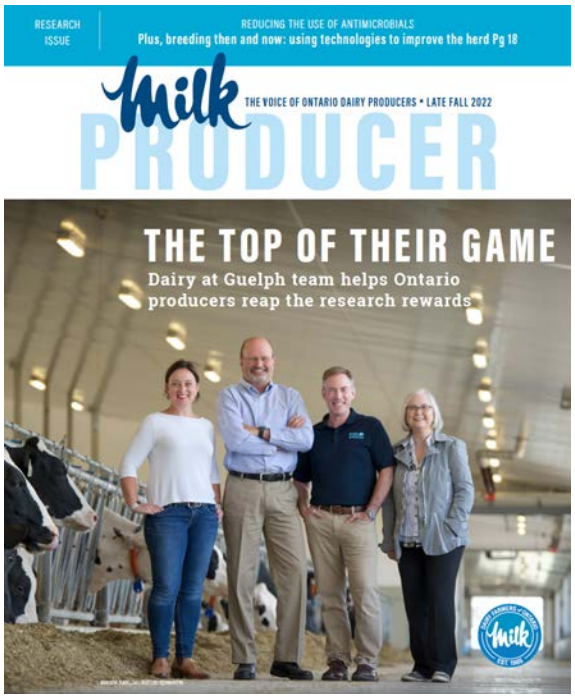
Sustainable milk production

Improving reproductive health in dairy cows, optimizing reproductive management with activity monitors, improving treatment of illness and antimicrobial stewardship in calves, and understanding barriers for dairy farmers in implementing evidence-based best management practices.

From left: Drs. Stephen LeBlanc, David Kelton and David Renaud

CELEBRATING RESEARCH CONNECTIONS

Dairy at Guelph continues to work with dairy industry groups like Dairy Farmers of Ontario to cconnect with dairy producers. Part of that work includes stories on dairy research projects and people in Milk Producer Magazine and the newly created Dairy Farm Insider.



Cover of the fall issue of Milk Producer Magazine

January issue of Milk Producer Magazine featuring a story on digital technology in veterinary care.